an arc-shaped field in said image plane, wherein a radial direction in a middle of said arc-shaped field defines a scanning direction,

wherein said first mirror and said second mirror are arranged in an optical path of said imaging system in such a position and having such a shape that an edge sharpness of said arc-shaped field is smaller than 5 mm in said scanning direction, wherein said edge sharpness is defined as a difference of a greatest value and a smallest value in said scanning direction of points of a spot diagram in said image plane for an edge field point of said arc-shaped-field,

wherein rays traveling from said object plane to said image plane in said imaging system impinge said first and said second mirror defining a first and a second used area on said mirrors, and

wherein said rays impinge said first and said second mirror in said used area with incidence angles relative to a surface normal of said mirrors $\leq 30°$ or $\geq 60°$.

34. (New) The multi-mirror system of claim 33, wherein said edge sharpness is smaller than 2 mm.

35. (New) The multi-mirror system of claim 33, wherein said incidence angles are $\leq 20°$ or $\geq 70°$.

36. (New) The multi-mirror system of claim 33, wherein said first mirror and said second mirror are arranged in said optical path such that a second edge sharpness of said arc-shaped field smaller than 5 mm in a direction perpendicular to said scanning direction, wherein said second edge sharpness is defined as a difference of a greatest value and a smallest value perpendicular to said scanning direction of points of a spot diagram in said image plane for an edge field point of said arc-shaped field.

37. (New) The multi-mirror system of claim 33, wherein said object is an arc-shaped field in said object plane.

38. (New) The multi-mirror system of claim 33, wherein a magnification ratio of a field imaged by said imaging system is unequal to 1.

39. (New) The multi-mirror system of claim 33, wherein said imaging system is a non-centered system.

40. (New) The multi-mirror system of claim 33, further comprising a field stop located in or close to said object plane.

41. (New) The multi-mirror system of claim 33, further comprising an exit pupil and an aperture stop, wherein said aperture stop is located on or close to a plane conjugate to said exit pupil.

42. (New) The multi-mirror system of claim 33, further comprising an exit pupil, wherein said first mirror is positioned close to a plane conjugate to said exit pupil.

43. (New) The multi-mirror system of claim 33, wherein at least one of said first and second mirror is an aspheric mirror.

44. (New) The multi-mirror system of claim 33, wherein said first mirror is a concave mirror having a nearly hyperbolic form or a nearly elliptic form and defines a first axis of rotation.

45. (New) The multi-mirror system of claim 44, wherein said second mirror is a concave mirror having a nearly hyperbolic form or a nearly elliptic form and defines a second axis of rotation.

46. (New) The multi-mirror system of claim 45, wherein said used area is arranged off-axis in respect to said first and second axis of rotation.

47. (New) The multi-mirror system of claim 45,

wherein said first axis of rotation and said second axis of rotation subtend an angle γ, and said first mirror and said second mirror define a first magnification for a chief ray traveling through a center of said arc-shaped field and a center of an exit pupil, a second magnification for an upper COMA ray traveling through said center of said arc-shaped field and an upper edge of said exit pupil, and a third magnification for a lower COMA ray traveling through said center of said arc-shaped field and a lower edge of said exit pupil, and

wherein said angle γ between said first and said second axis of rotation is such that said first, said second and said third magnification are nearly identical.

48. (New) An illumination system for lithography with wavelengths ≤ 193 nm, comprising:

the multi-mirror system of claim 33; and

an optical component for forming an arc-shaped field in said object plane.

49. (New) The illumination system of claim 48, further comprising a device having a plurality of raster elements for forming secondary light sources.

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50. (New) An EUV projection exposure unit for microlithography comprising:

the illumination system of claim 48, wherein said illumination system includes an exit pupil;

a mask on a carrier system, said mask being positioned in said image plane;

a projection objective with an entrance pupil, said entrance pupil being in a same plane as said exit pupil; and

a light sensitive object on a carrier system.

51. (New) A scanning system comprising the EUV projection exposure unit of claim 50.

52. (New) A process for producing a microelectronic device, comprising using the EUV projection exposure unit of claim 50.

53. (New) A multi-mirror system for an illumination system for lithography with wavelengths ≤ 193 nm, said multi-mirror system comprising an imaging system having:

an object plane;

an image plane in which said imaging system forms an image of an object;

an arc-shaped field in said image plane;

a normal incidence mirror; and

a field forming optical component for producing said arc-shaped field, wherein said field forming optical component comprises a mirror.

54. (New) The multi-mirror system of claim 53, wherein said object is an arbitrary field in said object plane.

55. (New) The multi-mirror system of claim 54, wherein said arbitrary field is a rectangular field, and said rectangular field is formed into said arc-shaped field by said field forming optical component.

56. (New) The multi-mirror system of claim 53, wherein said mirror of said field forming optical component is a grazing incidence mirror having negative optical power.

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57. (New) The multi-mirror system of claim 54,

wherein said mirror of said field forming optical component is a first grazing incidence mirror with positive optical power, and

wherein said field forming optical component further comprises a second grazing incidence mirror for rotating said arbitrary field.

58. (New) The multi-mirror system of claim 53,

wherein said normal incidence mirror is a first normal incidence mirror,

wherein said imaging system further comprises a second normal incidence mirror, and

wherein said mirror of said field forming optical component is a grazing incidence mirror.

59. (New) The multi-mirror system of claim 53, further comprising a field stop located in said object plane.

60. (New) The multi-mirror system of claim 54, wherein said arbitrary field is imaged by said imaging system and has a magnification ratio unequal to 1.

61. (New) The multi-mirror system of claim 53, wherein said normal incidence mirror is aspheric.

62. (New) The multi-mirror system of claim 53, wherein said field forming optical component is positioned close to said image plane.

63. (New) The multi-mirror system of claim 53,

wherein said normal incidence mirror defines an axis of rotation,

wherein said mirror of said field forming optical component is a first grazing incidence mirror,

wherein said field forming optical component further comprises a second grazing incidence mirror,

wherein said normal incidence mirror, said first grazing incidence mirror and said second grazing incidence mirror each have a used area upon which a ray traveling through said imaging system impinges, and

wherein said used area of said normal incidence mirror, said used area of said first grazing incidence mirror and said used area of said second grazing incidence mirror are off-axis with respect to said axis of rotation.

64. (New) The multi-mirror system of claim 53, wherein said mirror of said field forming component is aspheric.

65. (New) An illumination system for lithography with wave lengths ≤ 193 nm comprising:

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a light source;

the multi-mirror-system of claim 53;

an arbitrary field in said object plane; and

a device having a plurality of raster elements for forming secondary light sources.